

*Is it hot enough for everyone? When is it gonna rain?*

How many time have you heard those questions lately? When folks find out you're into weather there are always lots of questions. This month we've got a note from Sam Herron, forecaster at the [Nashville Weather Forecast Office](#). He gives us a view of how CoCoRaHS is used by the National Weather Service and answers some questions we all have. Thanks Sam!

[CoCoRaHS](#) continues to move along with over 650 registered observers in Tennessee. We are now in 78 of the 95 counties but we still need more folks. Please pass along this newsletter to anyone you know that might be interested in participating.

If you are going to the Wilson County Fair this month, look for the National Weather Service booth, stop by and say "Hello."

Thanks for all you're doing and remember - *Every Drop Counts!*

Ralph

*Greetings, CoCoRaHS friends! Ralph Troutman asked me to step in for this month's newsletter to give a meteorologist's perspective on the CoCoRaHS program. I am Sam Herron, Davidson County CoCoRaHS Coordinator and National Weather Service Meteorologist in Nashville. First, thanks to Ralph and our other state coordinators for great work with the CoCoRaHS program in Tennessee. We forecasters are constantly pleading for more observation data, and CoCoRaHS has yielded tremendous results. The forecasters at NWS Nashville look at the CoCoRaHS reports every day. We use the data to expand our knowledge of local patterns, verify predictions, and improve forecasts for the area.*

Tennessee has been suffering drought conditions this spring and summer. As a result, many stations have been logging zero rainfall day after day. Late summer and early fall are typically dry times, so I expect to see many more zeros in the coming months. Although they can become tiresome to view and report, zeros are important!

In addition to providing verification of dry forecasts, the reports are available for drought assessment. Also, "zero" reports are valuable to the long term record. Climate research projects cannot just assume no rain fell when no report is entered, so we need your zeros! However, if you are unsure about rainfall for some reason, your report should be "missing". No data is better than bad data.

Despite the overall drought pattern, some areas have had good rainfall at times this summer. Some days we have posted seemingly conflicting headlines on our website- one declaring a severe drought in progress, and the next indicating the issuance of flood advisories. Strangely, this is the reality when slow moving summer thunderstorms produce extreme downpours on some spots, while other areas continue to bake. The rain is definitely needed, but too much in a short period can be overwhelming. Once again, CoCoRaHS shows us just how variable and extreme weather can be. The attached image shows Williamson County 24 hour rainfall reports from 7:00am 7/24/2007. Note the 1.41" report in the northeast corner of the county (TN-WL-10), while several stations within a few miles reported zero rainfall. The severe thunderstorm that produced this localized heavy rain event also produced hail the

size of nickels. The hail report was entered on CoCoRaHS and used in a public report by the National Weather Service.

So how can CoCoRaHS help the National Weather Service make better forecasts?

During summer weather patterns, percent rain chances expressed in forecasts are more closely related to the coverage of rainfall rather than the potential that rain will develop. For example, we may be nearly 100 percent sure that thunderstorms will develop on a given day, but the storms will be scattered, affecting only about 30 percent of the area. Since we are unable to pinpoint exact locations of thunderstorms before they develop, we will forecast a 30 percent chance of rain across the area. Some locations will get the rain, and ideally, 70 percent of the area will not see rain. The daily CoCoRaHS reports, along with radar data, help us see exactly how much of the area had rain and how much rain fell. By making day to day comparisons of atmospheric conditions and actual reports, we can fine tune the rain chances and expected rainfall amounts issued in our forecasts.

In addition to the direct results already mentioned, the National Weather Service has benefited from CoCoRaHS in some indirect ways. We have had many phone calls from folks wanting to join. Speaking directly with people who love weather and embrace the volunteer spirit makes our jobs much more rewarding. Several NWS staff members are CoCoRaHS observers and coordinators. Taking daily readings and sharing those reports (bragging rights for most rainfall) is fun, and gets back to the basics that got a lot of us “weather weenies” started in meteorology.

CoCoRaHS has really taken off in Tennessee- well beyond our early expectations. Hopefully, this program will continue to grow and be strong with high quality reports. Thank you for taking the time to carefully measure rainfall and send reports. Thank you for being part of the weather community. And from this NWS Meteorologist, thank you for showing how much you value weather information.